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Moving towards Systems and Design Thinking through Implementation Science.

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**Moving towards Systems and Design Thinking through
Implementation Science**

Abstract

Systems Improvement through Service Collaboratives (SISC) is an initiative within Open Minds, Healthy Minds: Ontario's Comprehensive Mental Health and Addictions Strategy, a ten year plan that commits to transformation of mental health and addiction services for all Ontarians. Within the first three years of the SISC initiative, 18 Service Collaboratives facilitated local systems change to better support individuals with mental health and addictions needs. The initiative is sponsored by the Provincial System Support Program at the Centre for Addiction and Mental Health.

The SISC initiative, used a strategic framework (Implementation Science) to guide a geographically dispersed, cross-sector and community-led systems change process in mental health and addictions. This experience has highlighted some integration with systems and design thinking.

When utilized effectively, The Implementation Science framework provides an evidence-informed process to guide intentional, actionable change,. We can look to innovative large-scale initiatives, like SISC, that have tested and adapted approaches in a variety of contexts to better understand how to fully realize the value of integrating these frameworks into evolving system design practices.

Introduction

Systems thinking requires us to explore the relationships between the components, structures and behaviours that make up a system (Savigny & Adam, 2009). The aim of the Systems Improvement through Service Collaboratives (SISC) initiative is to use Implementation Science as an evidence-based guiding framework in order to foster systems thinking and ultimately achieve system change. One way we are working towards this is by exploring design concepts and thinking about how they can enhance our work.

Systems Improvement through Service Collaboratives (SISC) is an initiative within Open Minds, Healthy Minds: Ontario's Comprehensive Mental Health and Addictions Strategy, a ten year plan that commits to transformation of mental health and addiction services for all Ontarians. Within the first three years of the SISC initiative, 18 Service Collaboratives facilitated local systems change to better support individuals with mental health and addictions needs. The initiative is sponsored by the Provincial System Support Program at the Centre for Addiction and Mental Health (CAMH). In total, Service Collaboratives engage more than 2,500 members including service providers, family members, and individuals with lived experience of mental health and addictions needs.

In hopes of improving the success of this provincial initiative, several guiding frameworks were identified and integrated into the local systems change processes. These frameworks included:

1. Implementation Science – An evidence-based approach to ensure the faithful implementation of interventions (Bertram, Blasé & Fixsen, 2013).
2. Health Equity – An approach to strive for the highest level of health for all by addressing significant inequities in health outcomes between population groups (Braveman, 2014).
3. Use of Evidence – A commitment to the integration of the best available findings from the external research, service provider expertise, and lived experience (National Collaborating Centre for Methods and Tools, 2012)
4. Evaluation – Application of the RE-AIM Framework which formulates a process to review and evaluate health and behavioural literature, develop program design for broad implementation, assist in implementation “going to scale” and achieving of desired and applied outcomes (Glasgow, Vogt & Boles, 1999).
5. Quality Improvement - An approach to analyzing processes and systematically improving them to realize positive systems change outcomes (The Health Foundation, n.d.).
6. Sustainability – The process of ensuring an adaptive system intervention that can be integrated into ongoing operations (Centre, Daley, Hays & Johnson, 2004).

This working paper will focus on Implementation Science (IS), how it can be applied at a systems level and how it can be conceptualized in alignment with design thinking. We will briefly touch on how our use of the IS framework has improved our systems thinking and increased awareness of design concepts as well as other frameworks, theories and tools that can enhance our work.

What is Implementation Science?

Implementation is "a specified set of activities designed to put into practice an activity or program of known dimensions"(NIRN, 2013). It's based on the assumption that when effective interventions are implemented as intended, and with the appropriate supports, impactful outcomes will follow.

The SISC initiative adopted the National Implementation Research Network's (NIRN) Active Implementation Frameworks to help ensure that interventions are put in place as they were intended (NIRN, 2013). The frameworks serve as a roadmap and offer:

- a clear process to follow;
- steps for the creation of a practical implementation plan;
- concrete tools; and
- well-defined objectives for successful implementation.

Together these frameworks help define the roles and responsibilities of all players, as well as the resources that will be needed and how they will be used. IS supports participating stakeholders with the task at hand by clearly and realistically identifying expected outcomes, and showing how they will be achieved and sustained.

The staged process of IS ensures communities implementing interventions set aside time for each of the following stages:

- **Exploration:** Explore the problem and identify or develop an appropriate evidence-based or evidence-informed intervention to address it;
- **Installation:** Plan the details and adaptations that will need to be in place;
- **Initial Implementation:** Put the intervention into practice and troubleshoot problems that arise with quality improvement approaches; and
Full Implementation: Evaluate its success and fidelity, make any necessary changes and scale up or sustain the intervention until it's "business as usual."

IS provides an integral structure that helps SISC communities implement their chosen interventions. Its depth and evidence-based foundation give participants the confidence they need to invest time, energy, and resources into the initiative.

Applying Implementation Science at a Systems Level

The application of IS in cross-sector, systems work is characterized by an ongoing balance between flexibility, adaptation and fidelity to the evidence-based IS approach (NIRN, 2013).

Below are some examples of factors for consideration when mobilizing the IS framework from an organizational level framework to a system level framework, some of which are accompanied by adaptation tips.

1. **Extended timelines for the Exploration stage** to allow for the volume of cross-sector partners that need to be consulted and participate in the identification of a system gap and intervention that is relevant to all stakeholders in the system.
Adaptation Tip: To allow for adaption of the IS framework at a system level, the SISC initiative has also included a **Pre-exploration stage** which takes into consideration the extended time required for developing partnerships and identifying and describing the strengths, capacities and needs across communities.
2. **The ongoing nature of engagement and relationship building** that crosses various sectors and considers competing agendas, mandates, funding streams and system environment.
3. **The identification of stakeholders to champion the intervention** being implemented and supporting them to apply systems thinking to this champion role that considers factors beyond those specific to their organization or their sector.

Adaptation Tip: This involves adapting the selection of champions and leaders with experiential expertise from a local to a system level.

4. **A specific and system level approach to sustainability and community ownership** that moves beyond the implementation of IS within an organization to doing so across multiple organizations while considering the changing system environment around them.

Adaptation Tip: This has involved adapting IS tools to pose system-level questions to the group and also embedding sustainability within the system context as a component of IS tools.

Conceptualizing Design within Implementation Science

Within each IS stage, many activities are undertaken to support the change management process. Design concepts can easily be embedded and aligned within the IS framework and stages. For instance, the organizational design concepts encompassed by The Star Model™ (Galbraith, 2014), include Strategy, Structure, Processes, People, and Rewards. These categories manifest throughout the IS stages.

- **Strategy:** Throughout the **Exploration stage**, the group identifies a need for the change, learns about possible solutions, discusses how to implement effectively, and creates readiness for change.
- **Structure & People:** Moving into the **Installation stage**, the group identifies further resources, selects staff to support the implementation at various levels, develops evaluation and coaching supports and formulates foundational materials.
- **Processes & People:** In the **Initial Implementation stage**, the group conducts initial assessments, coaches on the intervention, uses Plan-Do-Study-Act cycles in the process and creates communication linkages. The final stage of **Full Implementation** involves ensuring sustainability, analyzing results and outcomes and spreading the intervention to new populations and areas.
- **Rewards:** Celebrating participation, on-going efforts, and moving forward occurs throughout the IS stages.

See Figure 1 on the following page.

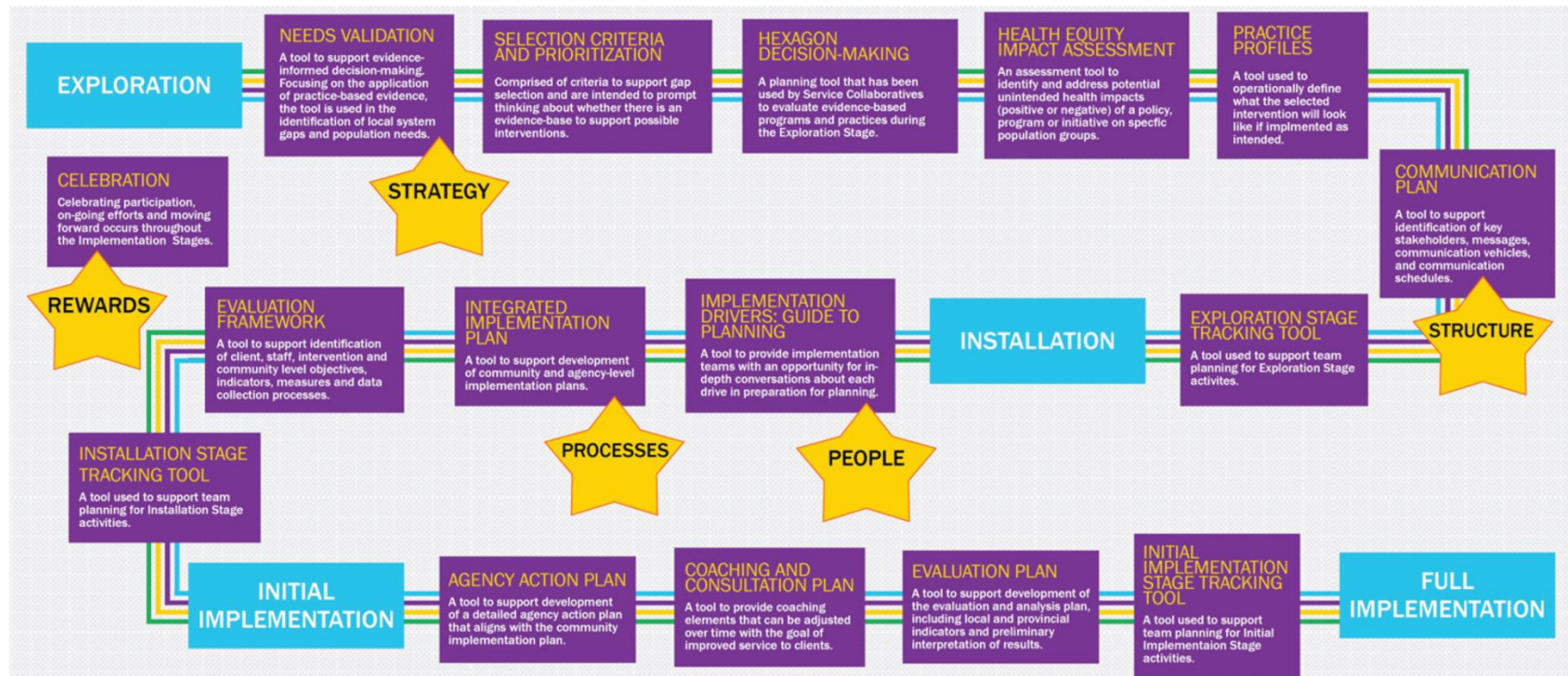
This is just one example of how design concepts are aligned and can be embedded within the Active Implementation Science Frameworks. The process is one that is non-linear and dynamic. As such, other design concepts we have explored intertwine and are fluid across all IS stages resulting in a very innovative and responsive process.

Moving towards Systems and Design Thinking using a Toolkit

Applying frameworks at a system level generates numerous opportunities to build capacity within a team and program. Design concepts have been the first lessons harvested for a newly developed and co-created Toolkit within CAMH's Provincial System Support Program. The Toolkit has been launched to mobilize the exploration and sharing of theories, tools and models to further enhance our system improvement work.

The Toolkit is designed to generate a collection of guidelines, concepts and activities to help navigate the complexity of the groups that implementation teams support in communities across Ontario. The Toolkit will be populated by a variety of functional roles and portfolios across CAMH's Provincial System Support Program. To date, the Toolkit includes information sheets on group process models, systems theory and systems thinking tools like the Iceberg Model.

Figure 1. Mapping an Organizational Design Framework to IS



The development, launch, sustainability and evaluation of the Toolkit begins to demonstrate the ways in which an implementation team uses the IS framework within its own organization. implementation teams will continue to adapt IS tools and incorporate additional frameworks, tools and theories from the Toolkit to meet the needs of local communities and foster system change.

Conclusion

The SISC initiative at the Provincial System Support Program of CAMH continues to build capacity by implementing interventions. Using IS as an evidence-based guiding framework and exploring how design concepts align within it is the next step towards enhancing our capacity for system improvement. There are other theories, models and frameworks that can help with encouraging systems and design thinking that align with IS and can be used to problem solve and

enhance our system support work. We can look to innovative large-scale initiatives, like SISC, that have tested and adapted approaches in a variety of contexts to better understand how to fully realize the value of integrating these frameworks into evolving system design practices. Systems and design concepts as well as other frameworks can be applied in a dynamic way across IS resulting in a responsive system support mechanism for Ontario's mental health and addictions system.

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